DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

OPNAVINST 3501.409
N44
17 Jun 2021

OPNAV INSTRUCTION 3501.409

From: Chief of Naval Operations

Subj: REQUIRED OPERATIONAL CAPABILITIES AND PROJECTED OPERATIONAL ENVIRONMENT FOR THE EN ROUTE CARE SYSTEM

Ref: (a) OPNAVINST C3501.2L
(b) DoDD 6200.04 of 9 October 2004
(c) JP 4-02
(d) OPNAVINST 4040.39C

Encl: (1) Projected Operational Environment for the En Route Care System
(2) Required Operational Capabilities for the En Route Care System

1. Purpose. To issue required operational capabilities and the projected operational environment for the En Route Care (ERC) System.

2. Background. The ERC system provides personnel, equipment and consumables for uninterrupted continuation of patient care during movement.

3. Scope and Applicability. Enclosures (1) and (2), prepared as directed by reference (a), define ERC System mission areas, operational capabilities and employment environments. This instruction supports manpower planning and readiness reporting criteria definition.

4. Action. The deployable medical systems resource sponsor, Medical Systems Integration & Combat Survivability (OPNAV N44), in coordination with the Navy Surgeon General will periodically review this instruction and recommend changes when the required operational capabilities or projected operational environments for ERC System are significantly altered.

5. Records Management.

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned per the records disposition schedules located on the Department of the Navy Assistant for Administration, Directives and Records Management Division portal page at https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx.

b. For questions concerning the management of records related to this instruction or the records disposition schedules, please contact the local records manager or the OPNAV Records Management Program (DNS-16).

6. Review and Effective Date. Per OPNAVINST 5215.17A, OPNAV N44 will review this instruction annually around the anniversary of its issuance date to ensure applicability, currency and consistency with Federal, Department of Defense, Secretary of the Navy and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will be in effect for 10 years, unless revised or cancelled in the interim and will be reissued by the 10-year anniversary date if it is still required, unless it meets one of the exceptions in OPNAVINST 5215.17A, paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for cancellation as soon as the need for cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.

R. L. WILLIAMSON
Deputy Chief of Naval Operations
(Fleet Readiness and Logistics)

Releasability and distribution:
This instruction is cleared for public release and is available electronically only via Department of the Navy Issuances Web site, https://www.secnav.navy.mil/doni/default.aspx.

PROJECTED OPERATIONAL ENVIRONMENT FOR THE EN ROUTE CARE SYSTEM

1. Operational Environment.

a. The ERC system provides personnel, equipment and consumables for uninterrupted continuation of patient care during movement, without clinically compromising the patient's condition. The ERC system provides skilled medical care for up to 2 critically injured or ill but stabilized patients to maintain clinical stability during transportation for up to an 8-hour transit via ground, surface or air.

Note: JP 4-02 defines stabilized as a patient's condition may require emergency, but not surgical intervention, within the evacuation phase. Patient's condition is characterized by secure airway, control or absence of hemorrhage, shock adequately treated and major fractures immobilized.

b. The ERC System could support a greater number of stable patients depending on platform capacity, nature of injury and patient acuity.

Note: JP 4-02 defines Stable: One who, in the best clinical judgment of the responsible medical provider, can withstand a bed-to-bed evacuation of up to 12 hours for intra-theater movement and 48 hours inter-theater and is unlikely to require intervention beyond the scope of standard ERC capability during the evacuation.

c. The ERC function can be performed throughout the continuum of care. ERC can support casualty evacuation (CASEVAC) from the point of injury (POI) and between treatment facilities. Medical evacuation (MEDEVAC) missions can also be supported by ERC.

Note: Per JP 4-02, the component commands are responsible for evacuation of the casualty from POI or illness to Role 1 or Role 2 via dedicated, designated or opportune ground [surface] or air transportation. Therefore, the Navy is responsible for ERC in the maritime domain, from the POI to the aeromedical evacuation (AE) transfer point. ERC can also be performed during AE. Per JP 4-02, defines CASEVAC is defined as the unregulated movement of casualties from the POI and between medical treatment facilities. Per the JP 4-02, MEDEVAC is defined as the patient evacuation system within the area of operations that is performed by dedicated, standardized platform (ground and air ambulances), with medical professionals who provide the timely, efficient movement and en route care. These dedicated assets are properly marked with a red cross per the Geneva Conventions and the law of war.

d. The Air Force is responsible for AE from the transfer point to definitive care. The smooth transition through the continuum of care requires the Navy to integrate within the Joint Patient Movement System and to be interoperable with Joint ERC processes and equipment. The ERC system is intended to be a very small team that is specially trained to provide ongoing care to casualties during patient movement. Their organic equipment set is small and quite limited,

but it can be augmented from theater medical assets on a case-by-case basis, such as being provided with blood, if transfusion is anticipated. ERC systems are highly mobile and can function on any dedicated or designated lift or lift of opportunity. They must also be trained to work on highly atypical platforms. ERC systems support patient movement for other capabilities, such as Expeditionary Resuscitative Surgical System, that do not have their own organic patient movement and ERC capability. ERC Systems provide the operational commander the ability to move patients without degrading other casualty care capabilities.

e. Major combat operations at sea present the most demanding environment in which the ERC system is designed to operate. In major combat operations involving Distributed Maritime Operations, a combatant Surface Action Group may operate at long distances from sources of robust medical support such as an Amphibious Ready Group Expeditionary Strike Group Carrier Strike Group or land-based expeditionary medical facilities. Supporting distributed maritime and littoral operations in a contested environment requires improved or advanced patient evacuation and ERC capabilities able to maximize survivability for increased number of casualties over long distance. This environment may require the ERC System to provide continuous care of patients beyond theater evacuation policy or doctrinal guidelines, depending on availability and proximity of patient movement assets.

2. Detailed Environmental Considerations. The ERC System will:

a. Support combat and contingency operations afloat or ashore. It may be employed across the range of military operations at the discretion of the supported combatant commander.

b. Be designed, manned, trained and equipped to support forward operation environments as annotated in subparagraphs 2b(1) through 2b(3) of this enclosure:

(1) Support to forces afloat aboard any U.S. Navy vessel.

(2) Support to Navy and Marine Corps forces in an expeditionary environment, in excess of those forces' organic capability (ashore or afloat).

(3) Conventional medical team support to Special Operations Forces ashore, afloat or subsurface.

c. Be operable and maintainable under conditions dictated by contingency operations, including altitude, climate and terrain. The equipment and consumables requiring special handling will be packaged in containers that meet or exceed handling requirements for the item.

d. Be capable of operating in climate extremes ranging from cold weather (-10° F) to tropical to desert environments (125° F), with base operating support provided by the supported or requesting operational commander.

e. Not be expected to operate independently within a chemical, biological, radiological environment.

f. Operate with U.S. Transportation Command (TRANSCOM)-approved patient movement items (PMI) that provide vital signs and other relevant patient information.

(1) The ERC System equipment will be selected from the U.S. TRANSCOM PMI Equipment and Durables Listing to ensure certification for movement throughout naval shipping and flight operations.

(2) ERC System relies on fleet or theater transportation assets in conjunction with support from treatment facilities for transportation between missions.

(3) ERC System will be certified for airworthiness on the MH-60, CH-53, MV-22 and CMV-22 and fixed-wing MEDEVAC- and CASEVAC-capable aircraft. Additionally, it can operate in other designated battle space through buildings of opportunity, pre-designated host nation facilities and limited spaces.

(4) ERC System can operate aboard all suitable means of maritime transportation within a multi-modal transportation network.

(5) ERC System can load and unload Authorized Medical Allowance List aboard host ships or other means of transport (e.g., helicopter, truck, tactical ambulance and rigid-hulled inflatable boat).

(6) Patients and ERC System Authorized Medical Allowance List PMI will be loaded and secured aboard a patient movement platform within the established standard operating procedure and Mission Profile timelines.

g. Rely on a host treatment facility to provide all essential base operating support, external communication infrastructure and force protection: ERC System personnel will coordinate organic capabilities and integrate with supported medical treatment facility for internal and external support requirements.

REQUIRED OPERATIONAL CAPABILITIES FOR THE EN ROUTE CARE SYSTEM

1. Mission and Employment Characteristics. The ERC System supports movement of patients providing uninterrupted patient care as close to the POI as possible or after the delivery of surgery or resuscitation in afloat or ashore environments without clinically compromising the patient's condition. The ERC System provides patient assessment and treatment, ventilation support, physiological monitoring, intravenous therapy, medication administration, supplemental oxygen therapy, airway maintenance, head and limb immobilization and resuscitative and hemorrhage control according to standard protocols for up to 2 critically injured or ill but stabilized casualties for up to 8 hours during transport. While in transit, the ERC System personnel can monitor the status of the patient and apply interventions to prevent clinical degradation. ERC Systems can provide continuous care of patients beyond theater evacuation policy or doctrinal guidelines under the most extreme operational circumstances. The ERC System could support a greater number of stable patients depending on platform capacity, nature of injury and patient acuity. The ERC System is designed, developed and resourced with unit type codes for equipment and manpower sets that can be coordinated through the Joint Operational Planning and Execution System for Operational Plan and contingency operations. The ERC System personnel and equipment will be staged with existing medical capabilities in theater as directed by the operational commander.

2. Detailed Operating Considerations. The ERC System will:

a. Provide ERC capability to support the combatant commander requirements. Be capable of supporting ERC with limited post-operative holding care, preparation of patients for movement and patient care during transport per references (a) through (c).

b. Be capable of deploying a certified ERC System within 10 days of receipt of a deployment order per the BUMED Tiered Readiness Policy.

c. Achieve operational capability within 30 minutes of the marriage of people and equipment.

d. Be employed when the situation requires prompt transportation of critically injured or ill but stabilized casualties to shore- or sea-based treatment facilities.

e. Provide ERC including patient assessment and treatment, ventilation support, physiological monitoring, intravenous therapy, medication administration, supplemental oxygen therapy, airway maintenance, head and limb immobilization and resuscitative and hemorrhage control according to standard protocols for 2 critically injured or ill but stabilized patients. Patient treatment protocols are under the medical direction of designated appropriate medial authority. Medical care providers or teams may give patient-specific care instructions to the ERC System personnel that supplement the overarching joint, service and theater guidance.

f. Provide PMI and medical materiel for the simultaneous care of 2 critically injured or ill but stabilized casualties for up to 8 hours during movement.

g. Be able to operate for 7 consecutive days followed by a day of rest and recovery. As circumstances permit, ERCS personnel should have 8 hours of uninterrupted rest in each 24-hour period.

h. Provide rapid integration of medical equipment within patient movement mode of transportation for simultaneous care of 2 critically injured or ill but stabilized patients. The ERC System could support a greater number of stable patients depending on platform capacity, nature of injury and patient acuity.

i. Be able to provide holding and prolonged field care beyond theater evacuation policy or doctrinal guidelines under the most extreme operational circumstances.

j. While in transit, monitor the status of the casualty and apply clinical interventions per approved protocols to prevent clinical degradation.

k. Upon arrival at the receiving facility, accompany the patient until responsibility of care is effectively transferred to the receiving medical team. Prior to exiting the mode of transport, the ERC System personnel will ensure all PMI and biohazardous materials have been collected and are ready for removal and disposal by receiving facility.

l. Transfer electronic or hand-written patient treatment records, created by ERC System personnel, to the receiving medical facility for input into theater medical information systems.

m. Maintain the ERC System equipment. This is limited to basic function checks and immediate action. Equipment maintenance functions require support of biomedical equipment technicians which must be provided by supported treatment facilities.

n. Provide ERC System personnel with a basic capability for survival in the chemical, biological, radiological environment.

3. Mission Areas. Primary (P) and secondary (S) mission areas are assigned per Table 2-1:

ERC System Mission Areas									
AT/FP	C2	CO	EXW	FS-A	HS	LOG	MOB	MOS	NCO
S	S	S	S	S	P	S	S	S	S

AT/FP: Anti-terrorism/Force Protection
C2: Command and Control
CO: Cyberspace Operations
EXW: Expeditionary Warfare

FS-A: Fleet Support - Administration HS: Health Services LOG: Logistics MOB: Mobility MOS: Missions of State NCO: Noncombat Operations

Table 2-1

4. Readiness Conditions. Reference (a) requires that required operational capabilities (ROC) be designated for each readiness condition or readiness state applicable to a unit. This designation supports determination of the unit's manpower requirement. Readiness conditions apply to ships; readiness states apply to aviation and staff units. Neither applies to ERC System. Although readiness conditions and states do not apply, ERC System will be subject to readiness reporting requirements based on prescribed primary and secondary mission areas and the assigned ROCs.

a. When an ERC System deploys (deployment for operations or exercises), all designated ROCs apply, either fully or with limitations, as listed below. An ERC System required capability and capacity do not vary with readiness condition (as does a ship) or with readiness state (as does an aviation or staff unit). ERC System trained personnel, equipment and supplies must support the full range and depth of required activities at any time while deployed. When not deployed, the unit is not expected to provide any of the listed capabilities.

b. BUMED establishes Tiered Readiness Program policy executed by subordinate commands to generate and report ready medical forces. The tiered readiness approach prioritizes unit preparedness by ensuring training prerequisites are planned and programmed on a prescribed training cycle. The Tiered Readiness Program balances the demand for capabilities with available resources to define a cycle of readiness. At any given time, only selected units have the mission capable readiness level to be routinely deployable.

5. ROC Symbols. Per Table 2-2, "Full" or "F" means capabilities are provided as prescribed by the ROC statement, i.e., all equipment required to meet this capability is available and operational in the platform authorized equipment list, manpower to meet the capability has been identified by skill set, experience level and quantity and appropriate training is available to meet full capability requirements. Per Table 2-2, "Limited" or "L" means capabilities can be only partially executed with organic ERC System resources (equipment, manpower, training) and may require external or host support to meet the Full requirement. All Limited ("L") entries are supported by a statement specifying the limitation.

REQUIRED OPERATIONAL CAPABILITY SYMBOLS	
FULL (F)	**LIMITED (L)**
Manned, equipped and trained to provide the specified capability.	Manned, equipped and trained to provide less than the specified capability.

Table 2-2

Mission Area	ROC #	EN ROUTE CARE ROC DESCRIPTION	CAPABILITY SYMBOL
ANTI-TERRORISM/FORCE PROTECTION (AT/FP)			
AT/FP	2	PROVIDE AT DEFENSE	
AT/FP	2.4	Anticipate and provide defenses against terrorist activities directed at ships, installations, facilities and personnel	
AT/FP		Implement local Force Protection Condition measures	F
COMMAND AND CONTROL (C2)			
C2	3	PROVIDE OWN UNIT'S C2 FUNCTIONS	
C2	3.8	Establish voice communication with USMC evacuation and command (L) Limited to internal voice communications with external communications requiring outside support nets and Naval Support Activity (NSA) net	L
C2	3.9	Establish voice communications with supported forces (L) Limited to internal voice communications with external communications requiring support from the evacuation platform	L
CYBERSPACE OPERATIONS (CO)			
CO	10	MAINTAIN AND MANAGE COMMUNICATIONS	
CO	10.2	Provide communications for own unit	
CO		Maintain tactical voice communications (L) Limited to internal voice communications with external communications requiring outside support	L
CO		Process messages (L) Limited to internal network infrastructure and external transmission system requiring host support	L
EXPEDITIONARY WARFARE (EXW)			
EXW	6	ESTABLISH AND MAINTAIN EXPEDITIONARY COMMUNICATIONS	
EXW	6.5	Conduct operational security (OPSEC) (L) Limited to internal communications systems only	L

Mission Area	ROC #	EN ROUTE CARE ROC DESCRIPTION	CAPABILITY SYMBOL
EXW	6.7	Conduct routine and preventive maintenance on a mobile communication system (L) Limited to internal communications systems only	L
EXW	9	CONDUCT EXPEDITIONARY BASE CAMP OPERATIONS	
EXW	9.2	Conduct liaison with host nation and other naval, joint or combined forces for support of base camp operations (L) In coordination with the host camp commander	L
FLEET SUPPORT - ADMINISTRATION (FS-A)			
FS-A	1	PROVIDE ADMINISTRATIVE AND SUPPLY SUPPORT FOR OWN UNIT	
FS-A	1.1	Provide supply support services (L) Limited by access to Theater Lead Agent Medical Material systems, PMI and consumables	L
FS-A	1.7	Provide inventory and custodial services (L) Limited to organic en route care equipment and supplies	L
FS-A	1.8	Provide personnel for living space maintenance (L) Limited to coordination with host medical treatment facility	L
HEALTH SERVICES (HS)			
HS	14	PROVIDE MEDICAL REGULATION, PATIENT MOVEMENT AND RECEIPT OF CASUALTIES AND PATIENTS	
HS	14.2	Train assigned, embarked and augmentation personnel in patient movement procedures	
HS	14.2a	CASEVAC (L) Limited to en route care	L
HS	14.2b	MEDEVAC (L) Limited to en route care	L
HS	14.2c	AE (L) Limited to transfer to point of embarkation.	L
HS	14.3	Provide appropriate equipment and PMI to conduct patient movement (L) Limited to one for one like-kind exchange.	L
HS	14.4	Coordinate administrative and logistic support for casualties and patients and PMI (L) Limited to coordination with supported medical treatment facility and theater patient movement assets	L

Mission Area	ROC #	EN ROUTE CARE ROC DESCRIPTION	CAPABILITY SYMBOL
HS	14.5	Coordinate and control patient movement operations and provide support for the following:	
HS	14.5a	CASEVAC (L) Limited to coordination with supporting Service patient movement assets	L
HS	14.5b	MEDEVAC (L) Limited to coordination with theater patient movement assets	L
HS	14.5c	AE (L) Limited to coordination with theater patient movement assets	L
HS	14.8	Transport and provide for casualty and patient evacuation (L) Limited to en route care	L
HS	17	PROVIDE HEALTH SERVICES TO OTHER UNITS, MILITARY SERVICES OR AGENCIES	
HS	17.3	Provide medical care and treatment for	
HS	17.3a	Joint Operations (L) Limited to en route care	L
HS	17.3b	Multinational Operations (L) Limited to en route care	L
HS	17.3c	Limited Contingencies (L) Limited to en route care	L
HS	17.3d	Crisis Response (L) Limited to en route care	L
HS	17.3e	Defense Support of Civil Authorities (L) Limited to en route care	L
LOGISTICS (LOG)			
LOG	2	TRANSFER AND RECEIVE CARGO AND PERSONNEL	
LOG	2.4	Transfer and receive personnel by helicopter (L) Limited to en route care	L
MOBILITY (MOB)			
MOB	11	MAINTAIN MOUNT-OUT CAPABILITIES	
MOB	11.1	Deploy with organic allowance within designated time period NOTE: Within 10 days after receipt of execution order per BUMED Tiered Readiness Policy	F
MOB	11.2	Mount-out selected elements or detachments	F

Mission Area	ROC #	EN ROUTE CARE ROC DESCRIPTION	CAPABILITY SYMBOL
MOB	11.3	Maintain capability for rapid airlift of unit or detachment as directed (L) Requires external ground or air transportation within theater of operations	L
MOB	11.5	Maintain capability for rapid ground conveyance of unit or detachment (L1) Capability limited to organic assemblage packaging (L2) Requires external ground transportation within theater of operations	L
MOB	14	CONDUCT OPERATIONS ASHORE	
MOB	14.1	Operate in climatic extremes ranging from severe cold weather to hot-dry (desert) to hot-humid (tropical) and coastal and ocean environments	F
MOB	14.2	Operate in rear of combat zone in afloat pre-positioning force or Marine Expeditionary Brigade operation	F
MOB	14.5	Conduct peacetime activation, mount-out and movement exercises of selected personnel and equipment to ensure capability of contingencies involving naval forces short of general war (L) Limited to availability of en route personnel, equipment and funding for deployment and retrograde.	L
MISSIONS OF STATE (MOS)			
MOS	1	PERFORM NAVAL DIPLOMATIC PRESENCE OPERATIONS	
MOS	1.8	Participate in military exercises with allied nations (L) Limited to availability of en route care personnel, equipment and funding for deployment	L
MOS	1.9	Participate in military exercises with non-allied nations (L) Limited to availability of en route care personnel, equipment and funding for deployment	L
MOS	3	PERFORM PEACEKEEPING	
MOS	3.3	Provide direct participation in a joint or allied peacekeeping force within a foreign country or region (L) Limited to en route care	L
MOS	16	FOREIGN HUMANITARIAN ASSISTANCE (FHA)	
MOS	16.2	Conduct disaster relief support operations (L) Limited to en route care	L
MOS	16.4	Conduct FHA (L) Limited to en route care	L

Mission Area	ROC #	EN ROUTE CARE ROC DESCRIPTION	CAPABILITY SYMBOL
MOS	16.5	Conduct humanitarian and civic assistance operations (L) Limited to en route care	L
NON-COMBATANT OPERATIONS (NCO)			
NCO	3	PROVIDE UPKEEP AND MAINTENANCE OF OWN UNIT	
NCO	3.1	Provide organizational level preventive maintenance	F
NCO	3.5	Provide for the proper storage, handling, use and transfer of hazardous materials (L) Limited to turnover of hazardous medical waste at the receiving medical treatment facility	L

Table 2-3